

REMARKS

Claims 1-15 are pending in the application. All claims stand rejected under 35 U.S.C. 102 as anticipated by U.S. Patent No. 5,802,063 to Deiss. In addition, all claims stand rejected under 35 U.S.C. 112, first paragraph, and under 35 U.S.C. 112, second paragraph. Also, a substitute specification and corrected abstract have been required. For the reasons set forth below, reconsideration of the amended application is respectfully requested.

1. Rejection of Specification and Abstract.

Paragraphs 1-4 of the pending Office Action relate to rejections of the specification and abstract. As indicated above, a substitute specification and abstract have been prepared and are submitted with this amendment. The modifications to the text were provided to address issues of syntax and idiom that arose from the translation of the original French specification. It is intended and believed that no new matter has been added by the substitute specification.

2. Rejections Under 35 U.S.C. 112, first paragraph.

Paragraphs 5-10 of the pending Office Action relate to rejections under 35 U.S.C. 112, first paragraph. In particular, the Office contends that the subject matter of the claims is not described in the specification, and/or that the specification does not enable the claimed invention. By way of example, the Office states that persons skilled in the art would have to carry out undue experimentation to add a conditional block in an entitlement control message. For the reasons below, Applicants' respectfully traverse the Office's rejections under 35 U.S.C. 112, first paragraph.

As to the Office's contention that the subject matter of the claims is not described in the specification, for the convenience of the Office a listing of all claims and a reference showing where support for the claim can be found in the specification is provided below. However, the listing is provided for illustrative purposes only, it being believed that all claims are further supported by the specification as a whole, including the claims as originally submitted.

Claim 1: p. 3, ll. 7-12; p. 6, l. 28 through p. 7, l. 15.

Claim 2: p. 7, ll. 17-21.

Claim 3: p. 3, ll. 20-24; p. 4, ll. 10-23.

Claim 4: p. 5, l. 26 through p. 6, l. 2.

Claim 5: p. 6, ll. 4-6.

Claim 6: p. 9, ll. 17-21.

Claim 7: p. 8, ll. 22-29.

Claim 8: p. 10, ll. 5-8.

Claim 9: p. 8, ll. 10-24.

Claim 10: p. 3, ll. 7-12; p. 6, l. 28 through p. 7, l. 15.

Claim 11: p. 7, ll. 17-21.

Claim 12: p. 9, ll. 9-22.

Claim 13: p. 9, ll. 17-21.

Claim 14: p. 9, ll. 1-6.

Claim 15: p. 7, l. 30 through p. 8, l. 20.

As to the Office's contention that the claims are not enabled and that persons skilled in the art would have to carry out undue experimentation to add a conditional

block in an entitlement control message, the Office's attention is directed to European standard EN 50094 (Ref. No. 50094:1992 E, enclosed herewith) "Access Control System for the MAC/Packet Family: EUROCRYPT," published in December 1992. That standard is a reference guide for persons skilled in the art and is well known in the field of the pay TV. The standard describes in a detailed way the different fields and data that can be included in an Entitlement Control Message ECM, noting in particular, on page 90, that the length of an ECM can vary. This means that data can be added to an ECM. On page 93 of the same document, is a list of available parameters. Among this list, one of them (PI=70) is a "Software parameter used when a software is to be added to process the subsequent parameters." Again, this information is well known to persons skilled in the art.

In view of materials such as Standard EN 50094, it is respectfully submitted that persons skilled in the art would have no difficulties to implement the feature of the invention. Undue experimentation would not be necessary, the artisan will only have to use the well known features described in the standard Eurocrypt.

Moreover, it is appreciated by the art that the way to add a supplemental block to an ECM is not fully standardized and depends on the specific requirements of each content provider. Thus, for a person skilled in the art, his normal work is to adapt the content of the ECM to the requirements of the content provider. Therefore, the specific way on how to add the additional block is not part of the claimed invention, although that aspect of the invention is clearly within the level of skill of persons in the art. The step of adding such block is, however, part of the invention.

For all the above reasons, Applicants' respectfully submit that the Office's rejections under 35 U.S.C. 112, first paragraph, should be withdrawn.

3. Rejections Under 35 U.S.C. 112, second paragraph.

Paragraphs 11-23 of the pending Office Action relate to rejections under 35 U.S.C. 112, second paragraph. In particular, the Office contends that the claims are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As indicated above, the claims have been amended to address the issues raised by the Office. Accordingly, Applicants' respectfully submit that the Office's rejections under 35 U.S.C. 112, second paragraph, should be withdrawn.

4. Rejections Under 35 U.S.C. 102.

Paragraphs 24-37 of the pending Office Action relate to rejections under 35 U.S.C. 102 based on U.S. Patent No. 5,802,063 to Deiss. For the reasons set forth below, reconsideration of the stated rejection is believed to be in order.

U.S. Patent No. 5,802,063 to Deiss describes a method in which messages are transmitted by packets. Each packet has an index. When a packet is received, the index of this packet is compared to the index of the previously received packet. If this index differs from the previous one from more than one unit, it is rejected.

Accordingly, the Deiss patent is a good description of the prior art as mentioned in the pending application. It therefore suffers from the drawback that a packet received in an incorrect order must be rejected and the system must wait the next reception of this rejected packet. This is because the packets described in Deiss '063 do not contain a conditional block effective for determining whether the current message is to be

processed without reference to all or part of the other messages member of the chain, and in the negative event, effective for defining conditions linking the processing of the current message member to the processing of all or part of other messages member of the chain. In Deiss, no mention is made of adding a condition into the message allowing the system to decide whether the message can be used immediately without condition, or whether the message needs fulfilling conditions in relation with the reception of other members of the chain.

By way of further background to assist the Office in its appreciation of the differences between Deiss and applicants' claimed invention, it is noted that applicants' invention relates particularly to a method applicable in a pay TV system in which big messages are transmitted from a head end to a receiver unit. Due to the fact that these messages are big, they cannot be sent as a whole and must be split in smaller messages. When a message is split into several management messages that form a chain of messages, it can happen that one first message in the chain is received by the receiver after another second message that corresponds to a later part of the whole message of the chain.

In the prior art, each time a message is received by the receiver, it is verified, thanks to an index, if the previous messages were correctly received. In case not, the message is rejected and the system waits until the next correct message is received. The object of the present invention is optimizing the management of messages when they are not received in the correct order. In order to achieve this object, each message contains a conditional block which enables the system to determine the conditions to be fulfilled prior to the processing of this message. For example, a conditional block could contain

the condition that messages 1 or 2 must have been received and that message 3 must have been processed. If messages 1 and 3 are received but not message 2, the current message will be processed as the conditions contained in the conditional block are fulfilled. On the contrary, in a prior art system, this message would be rejected until message 2 is received.

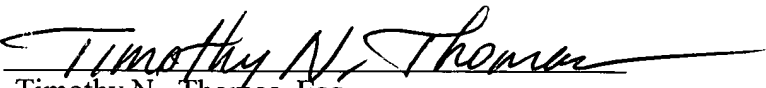
In Deiss, there are two types of blocks that could be considered as similar to the conditional block. One of them is a continuity count CC which corresponds to a message index. A detector examines the continuity count CC in the current packet to determine if it differs from the CC of the previous packet by one unit. If not, in particular if the difference is more than one, this corresponds to an error and the message would be rejected. This feature corresponds to the prior art as described previously, in which the messages must be received in the correct order to enable the receiver to process the messages.

The second type of blocks is the payload header containing conditional access code. As stated on col. 5, lines 11-43, each subscriber is assigned a specific conditional access code. This kind of block is used in relation with the subscriber's units but gives no indication about the order of a message in a message chain. Accordingly, it cannot be used to solve the problem of managing messages forming a chain of messages.

The object of the conditional block in Deiss is totally different from the object of the conditional block in the pending application. In one case (Deiss), this block is specific to a user or a group of user and contains private data bound to the receiving unit. In the pending application, the conditional block is the same for all the subscriber units receiving these messages.

Since the conditional block described in Deiss is not be used to optimize the management of the messages, and in particular to define which block can be executed before another one or which block must be received prior to processing one specific block, it is respectfully submitted that Deiss does not anticipate applicants' claimed invention. Favorable consideration of the amended application is therefore respectfully requested.

Respectfully submitted,

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